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Overview

Identification

COUNTRY

Georgia

EVALUATION TITLE

Energy Rehabilitation

EVALUATION TYPE

Independent Performance Evaluation

ID NUMBER

DDI-MCC-GEO-ENERGY-2010-v01

Overview

ABSTRACT

Gustavson Associates was retained by Millennium Challenge Georgia (MCG) to prepare a model to calculate the economic rate of return (ERR) for rehabilitation work that was undertaken on the north-south pipeline system in Georgia. The pipeline system was in poor condition due to erosion and corrosion. MCG spent \$35.2 million on the rehabilitation from 2006 through 2009. Work occurred at 22 sites during three phases.

The report proposes a stochastic (Monte Carlo) ERR model that compares two scenarios: (a) the actual scenario in which rehabilitation work was undertaken, thereby improving the reliability of the pipeline system and (b) a hypothetical counter-factual scenario in which the rehabilitation work was not undertaken, but rather, repairs are made in response to future pipeline failures. The benefit of the rehabilitation work is modeled as the avoided cost associated with the future pipeline repairs that would have been necessary without the rehabilitation work. The report discusses estimates of timing of future pipeline failures in the counter-factual scenario, and the costs associated with those failures, including the repair cost, the cost to replace gas lost due to the failure, and the economic impact of disruption in the gas supply.

EVALUATION METHODOLOGY

Independent Ex-Post ERR

TOPICS

Topic	Vocabulary	URI
Energy	MCC Sector	

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Gustavson Associates	Independent evaluator

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Review of Metadata

DATE OF METADATA PRODUCTION

2014-06

DDI DOCUMENT VERSION

Version 1 (June 2014)

DDI DOCUMENT ID

DDI-MCC-GEO-ENERGY-2010-v01

MCC Compact and Program

COMPACT OR THRESHOLD

Georgia Compact I

PROGRAM

In 2005, the Government of Georgia asked the Millennium Challenge Corporation (MCC) to provide financial support for rehabilitation of the North-South Gas Pipelines (NSGP). The Georgian Government established the Millennium Challenge Georgia Fund (MCG) to respond to the opportunities offered by the MCC funding. MCG was responsible for implementation of rehabilitation of the NSGP. Georgian Gas International Corporation, the predecessor of Georgian Oil and Gas Corporation (GOGC), assessed the technical condition of the north-south gas pipeline (NSGP) system in November and December 2005, with technical and financial assistance from BP Exploration Caspian Sea Ltd. They identified over 100 sites that required rehabilitation. It was determined that without rehabilitation there was a risk of catastrophic failure, particularly due to landslides in the mountainous regions of the country. Furthermore the pipeline would continue to degrade due to river erosion and scour, corrosion, and valve leakage. Six emergency sites were selected for Phase I of the rehabilitation program. In June 2006, MCG and GOGC entered into a contract for GOGC to provide Project Management Services for the rehabilitation. These services included developing designs and specifications for the rehabilitation, and supervision of contractors selected by MCG for implementation of the work.

MCC SECTOR

Energy (Energy)

Sampling

Questionnaires

Data Collection

Data Collection Dates

Start End Cycle

Data Processing

Data Appraisal